

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-079160
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator GEOCHEM EXPLORATION, LLC		7. If Unit or CA Agreement, Name and No. N/A
3a. Address P. O. BOX 356 CASPER, WY 82602		8. Lease Name and Well No. SKULL VALLEY FEDERAL 21-1
3b. Phone No. (include area code) (307) 266-4409		9. API Well No. 43-045-3003P
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 738' FSL & 1792' FEL 342184X 40.537735 At proposed prod. zone SAME SWSE 4488901Y -112863433		10. Field and Pool, or Exploratory WILDCAT
14. Distance in miles and direction from nearest town or post office* 15 AIR MILES SSW OF DELLE		11. Sec., T. R. M. or Blk. and Survey or Area 21-3S-9W SLM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,938'	16. No. of acres in lease 2,560	12. County or Parish TOOELE
17. Spacing Unit dedicated to this well SW4SE4	13. State UT	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth 7,500'	20. BLM/BIA Bond No. on file BLM LEASE WIDE UTB000253
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4,506' GL	22. Approximate date work will start* 06/01/2007	23. Estimated duration 6 WEEKS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 04/13/2007
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed) BRADLEY G. HILL	Date 04-23-07
Title Office	ENVIRONMENTAL MANAGER	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

RECEIVED

APR 16 2007

DIV. OF OIL, GAS & MINING

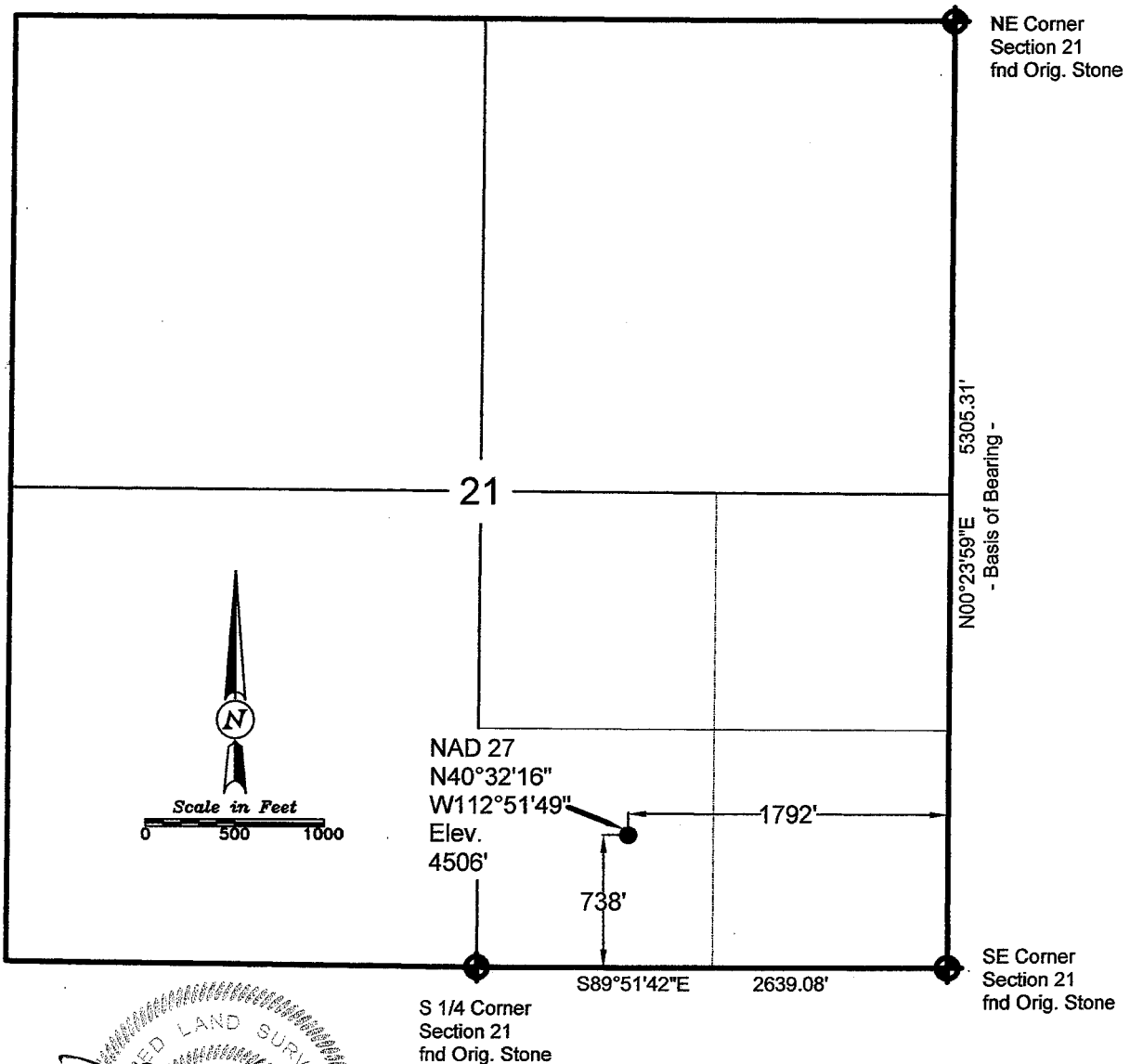
Federal Approval of this  
Action is Necessary

## Well Location Survey

### Merschat Minerals, LLC Skull Valley Federal 21-1

1792' fel & 738' fsl  
Section 21, T3S, R9W, SLB&M.  
Tooele County, Utah  
Ground Elevation- 4506' (NGVD29)

- Basis of Bearing is  $N00^{\circ}23'59''E$  between the SE corner and NE corners of Section 21 from GPS observations taken 24-May-2006
- Elevation values are derived as differential from SE corner of Section 21(4461) as shown on 7.5 minute USGS quadrangle



- Land use is open range land.
- There are no land ownership boundaries within 460 feet.
- There were no oil or gas wells observed within 920 feet.

Geochem Exploration, LLC  
Skull Valley Federal 21-1  
738' FSL & 1792' FEL  
Sec. 21, T. 3 S., R. 9 W.  
Tooele County, Utah

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## Drilling Plan

### 1. FORMATION TOPS

The estimated tops of important geologic markers are:

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Bonneville	0'	12'	+4,506'
Oquirrh	506'	518'	+4,000'
Lower Manning Canyon	1,306'	1,318'	+3,200'
Mississippi Manning Canyon	1,706'	1,718'	+2,800'
Great Blue	2,906'	2,918'	+1,600'
Humbug	4,006'	4,018'	+500'
Pine Canyon Deseret	4,806'	4,818'	-300'
Gardner	5,606'	5,618'	-1,100'
Devonian	6,606'	6,618'	-2,000'
Silurian	7,006'	7,018'	-2,500'
Total Depth (TD)	7,500'	7,512'	-2,994'

### 2. NOTABLE ZONES

The Devonian and Silurian are the target zones. No other mineral zones are expected. Most likely water zone (Bonneville) will be cemented off behind surface casing. Any other water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

Geochem Exploration, LLC  
Skull Valley Federal 21-1  
738' FSL & 1792' FEL  
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Tooele County, Utah

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### 3. PRESSURE CONTROL

BOP systems will follow Onshore Order #2 and API RP 53. The drilling contract has not yet been awarded. A typical model is on PAGE 3.

BOP controls will be installed before drilling the surface casing plug and stay in use until the well is completed or abandoned. Once out from under the surface casing, a  $\geq 3,000$  psi BOP and choke manifold system will be used. System will include anchored choke lines, kelly cock, pit level indicators, and flow sensor. A sub with a full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

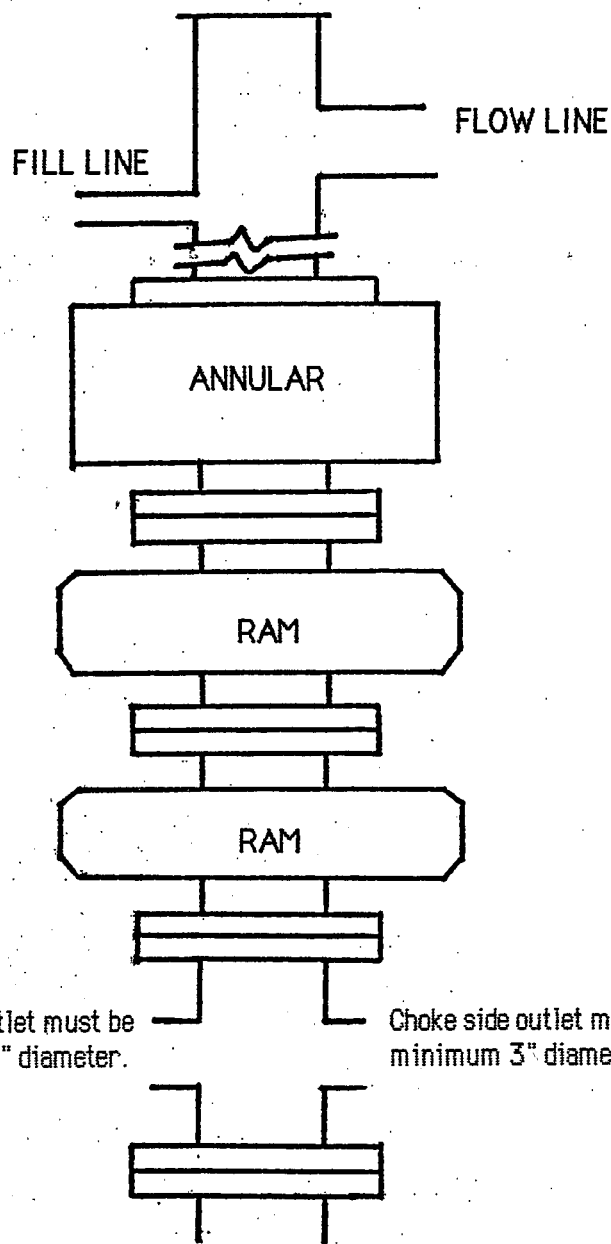
All BOP mechanical and pressure tests and inspections will be recorded on the daily driller's log. BOPs will be inspected and operated at least daily to assure good mechanical working order. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Surface casing will be tested to  $\geq 1,500$  psi and annular preventer to  $\geq 2,000$  psi.

### 4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>Depth Set</u>
20"	16"	75	J-55	Conductor	New	60'
12-1/4"	9-5/8"	36	J-55	S T & C	New	750'
8-3/4"	7"	23	HCN-80	L T & C	New	7,500'

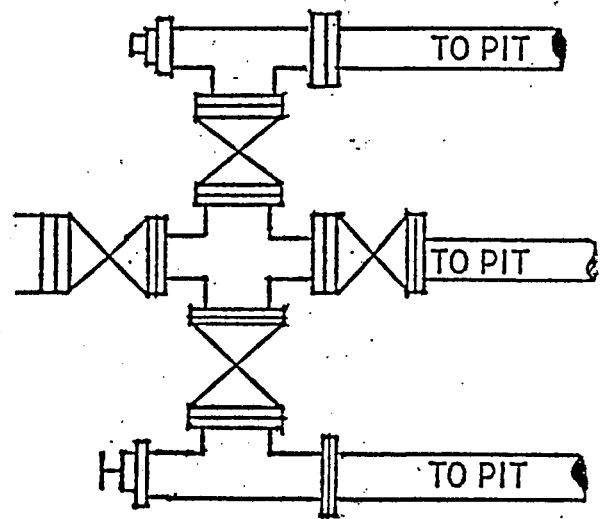
Conductor pipe will be cemented to the surface with  $\approx 50$  sacks ready mix.

Surface casing will be cemented to the surface with  $\approx 400$  sacks premium cement + 2%  $\text{CaCl}_2$  + 1/4 pound per sack cellophane. Yield = 1.18 cubic feet per sack. Weight = 15.6 pounds per gallon. Excess: >100%. A cement float shoe, centralizer in the middle of the shoe joint, and a centralizer every fourth joint will be installed.



TYPICAL BOP STACK  
& CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available.  
Safety valve and subs will fit all drill string connections in use.  
All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

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Tooele County, Utah

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Production casing will be cemented from TD to >500' above the highest pay zone with 35% excess. Devonian top is estimated to be at  $\approx 6,606'$ . Thus, following calculations are based on a cement top at  $\approx 6,000'$ . Cement with  $\approx 275$  sacks (332 cubic feet) 50/50 poz + 2% gel + 105 salt + 0.4% fluid loss preventer + 0.25 dispersant + 1/4 pound per sack cellophane. Yield = 1.21 cubic feet per sack. Weight = 14.4 pounds per gallon.

#### 5. MUD PROGRAM

A fresh water based low solids non-dispersed mud system with a weight of  $\approx 9.0$  pounds per gallon, viscosity of 35 to 40, and ph of 9 to 9.5 will be used. Sufficient mud material to maintain mud properties, control lost circulation, and contain a blowout will be available at the well site while drilling. A mud logger will be on location once the well is below surface casing. A flow sensor or pit volume totalizer will be used from the base of the surface casing to TD.

#### 6. CORES, TESTS, & LOGS

No cores are planned. There may be drill stem tests. A dual induction, SFL, bore hole compensated sonic, dip meter, and cement bond log will be run.

#### 7. DOWN HOLE CONDITIONS

Maximum expected bottom hole pressure will be <1,900 psi and temperature will be <100°F. No hydrogen sulfide is expected.

#### 8. OTHER INFORMATION

It is expected it will take  $\approx 4$  weeks to drill and  $\approx 2$  weeks to complete the well.

## Surface Use Plan

### 1. DIRECTIONS & EXISTING ROADS (See Pages 10 - 12)

From Exit 77 on I-80 ...

Go South 17 miles on paved Utah 196 to the equivalent of Mile Post 19.9

Then turn right and go Northwest 6.3 miles on Eight Mile Spring Road

Then turn left and go Southwest 9,155.6' cross country to the pad

Existing roads need no upgrading. Roads will be maintained to a standard at least equal to their present condition.

*This APD is also serving as a BLM road right-of-way application from the county road to the lease boundary. Right-of-way will cross S2SE4 Section 15, T. 3 S., R. 9 W. Length will be 1,804'. Width will be 30' Area will be 1.24 acres.*

### 2. ROAD TO BE BUILT (See Pages 11 & 12)

The new road will initially be flat bladed with a  $\approx 16'$  wide running surface and a maximum disturbed width of  $\approx 30'$ . Maximum grade will be  $\approx 5\%$ . Maximum cut or fill will be  $\approx 6'$ . No fence is crossed. Four vehicle turn outs will be built adjacent to PI 2, 3, 4, and 5. An 18" x 50' culvert will be installed in the county road borrow ditch. Three 24" x 30' culverts will be installed along the new road. Pit run will be installed in low water crossings or where ruts become  $> 6"$  deep. If production results, then the entire road will be crowned, ditched, and rocked.

### 3. EXISTING WELLS

There are no oil, gas, water, or injection wells within a one mile radius.

#### 4. PROPOSED PRODUCTION FACILITIES

One water tank, three oil tanks, and a separator or heater-treater will be set on the pad. All will be painted a flat Carlsbad tan. All will be inside a dike.

#### 5. WATER SUPPLY

Water will be trucked from private land (water right numbers 16-127 or 16-835) along the county road or state highway.

#### 6. CONSTRUCTION MATERIALS & METHODS (See Pages 13 - 15)

The top 6" of topsoil will be stripped and stockpiled east of the pad. Subsoil from the reserve pit will be stored west of the pad. A diversion ditch will be cut along the west side of the subsoil pile. The north corner of the pad will be trimmed. A  $\geq 12$  mil plastic liner will be installed in the reserve pit. Rock will be bought from an existing approved private pit.

#### 7. WASTE DISPOSAL

The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The fourth side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, contents of the reserve pit will be buried in place. No oil will be discharged into the pit. All oil will go into tanks.

All trash will be placed in a portable trash cage. It will be hauled to a county landfill. There will be no burial or burning. Human waste will be disposed of in chemical toilets or holding tanks. Contents will be disposed at state approved dump stations.



Geochem Exploration, LLC  
Skull Valley Federal 21-1  
738' FSL & 1792' FEL  
Sec. 21, T. 3 S., R. 9 W.  
Tooele County, Utah

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#### 8. ANCILLARY FACILITIES

There will be no air strip or camp. Camper trailers may be on location for the company man, tool pusher, and mud loggers.

#### 9. WELL SITE LAYOUT

See PAGES 13 - 15 for views of the well pad, cross section, cut and fill diagram, reserve pit, trash cage, access onto the location, parking, living facilities, and rig orientation.

#### 10. RECLAMATION

Reclamation will start when the reserve pit is dry. The pit will be back filled, well site contoured to match surrounding contours, and reserved topsoil evenly spread. Disturbed areas will be ripped before seeding. Seed will be broadcast in October or November with a BLM approved mix. Seeded areas will be harrowed and left rough after seeding. Water bars will be spaced every  $\approx$ 100 yards on the new road, placed in cut, and skewed to drain. The new road will be blocked by a 36" high dirt pile at the county road.

If the well is a producer, then the reserve pit, remaining topsoil pile, and any areas of the pad not needed for work overs will be reclaimed as previously described.

#### 11. SURFACE OWNER

All construction will be on federal land managed by BLM.

Geochem Exploration, LLC  
Skull Valley Federal 21-1  
738' FSL & 1792' FEL  
Sec. 21, T. 3 S., R. 9 W.  
Tooele County, Utah

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## 12. OTHER INFORMATION

The nearest hospital (Mountain West Medical Center @ (435) 843-3600) is a  $\approx$ 1 hour drive away in northwest Tooele at 2055 North Main Street.

Archaeology report 5257-01-20616 was filed in August by P-III.

## 13. REPRESENTATION

Anyone having questions concerning the APD should call:

Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop

Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

The field representative will be:

Walter Merschatt

(307) 266-4409

FAX: (307) 266-1110

Geochem Exploration, LLC has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Geochem Exploration, LLC.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Geochem Exploration, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the

Geochem Exploration, LLC  
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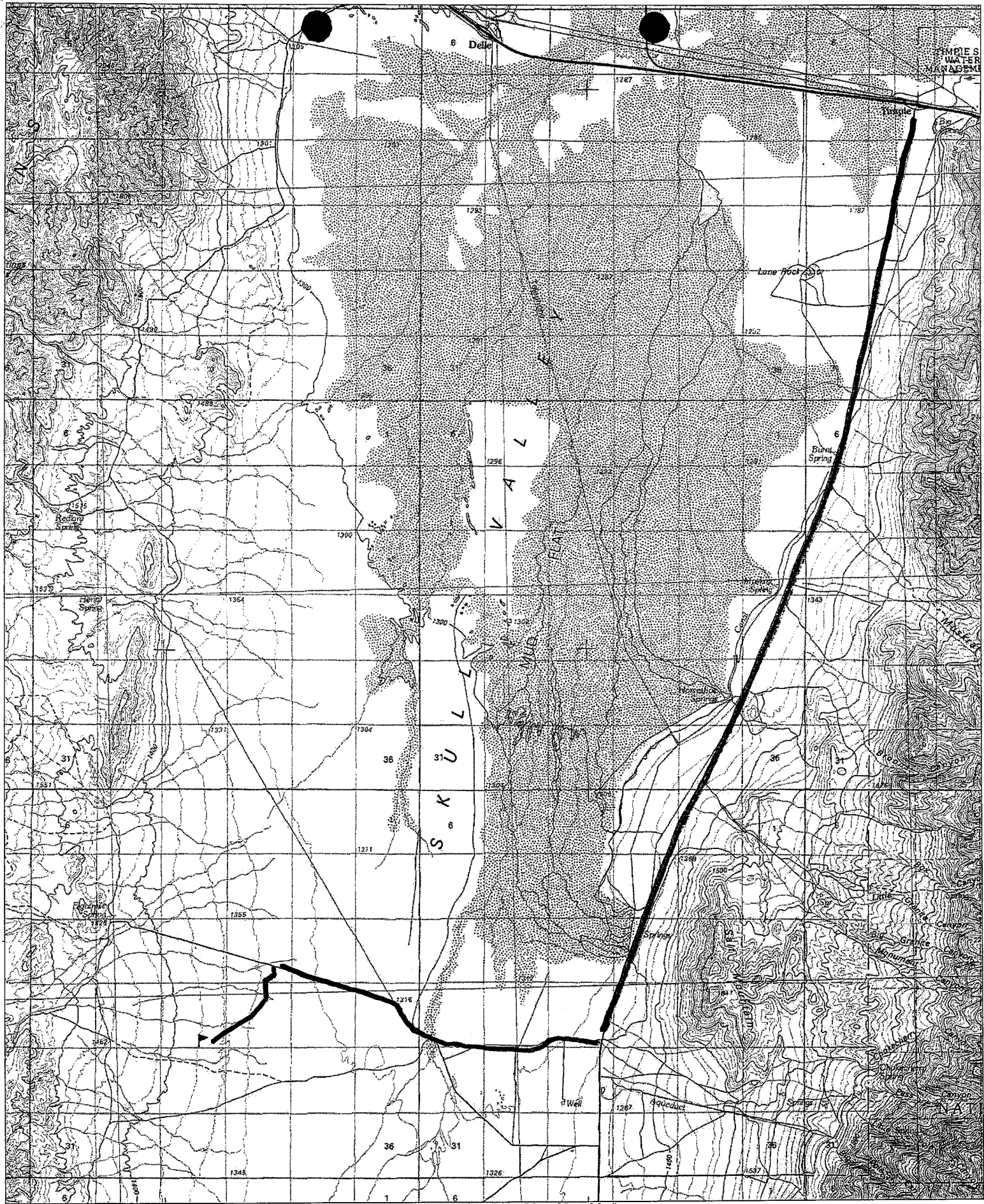
provisions of 18 U. S. C. 1001 for the filing of a false statement.

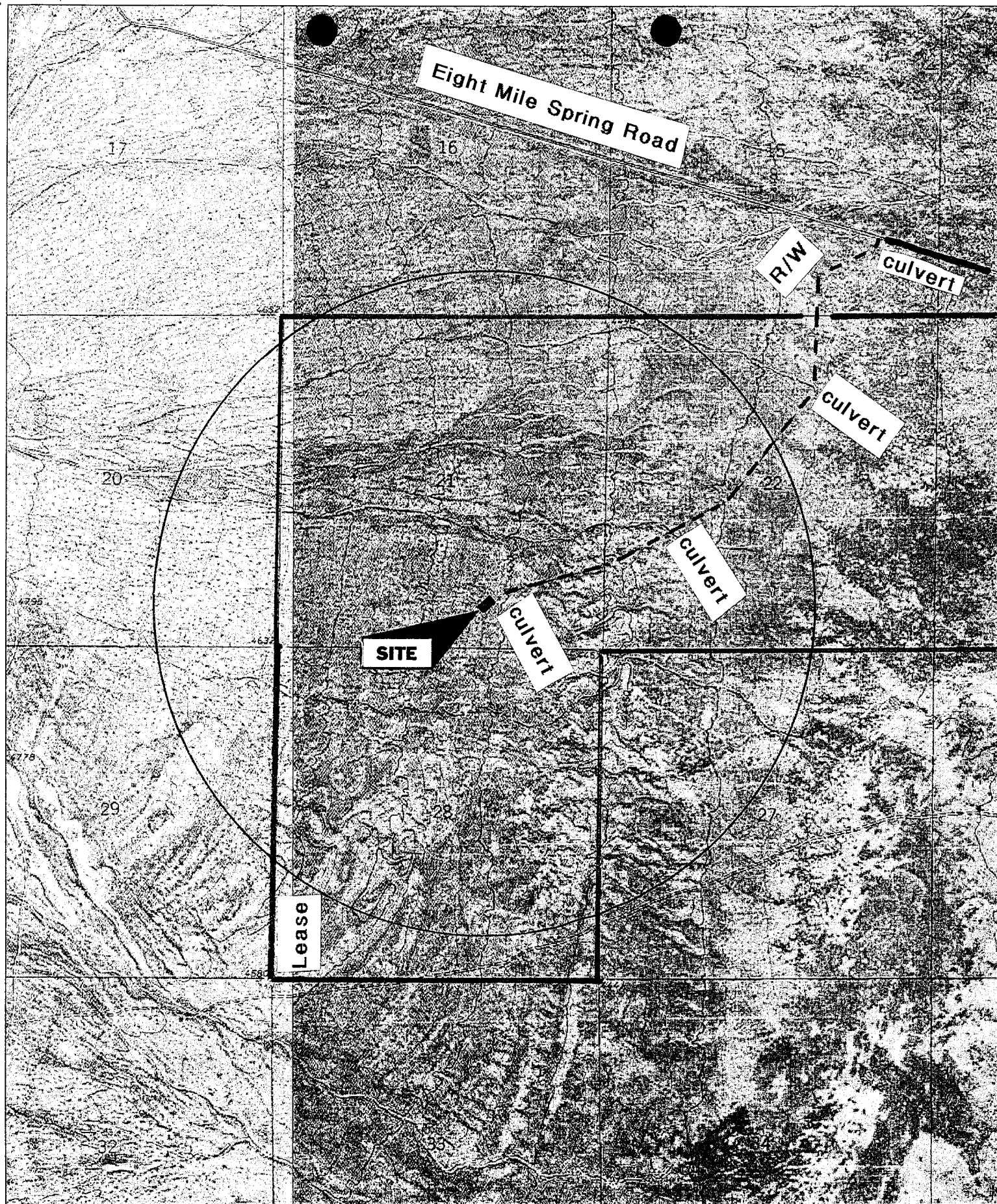


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Brian Wood, Consultant

April 13, 2007





TN ★ MN  
13½°

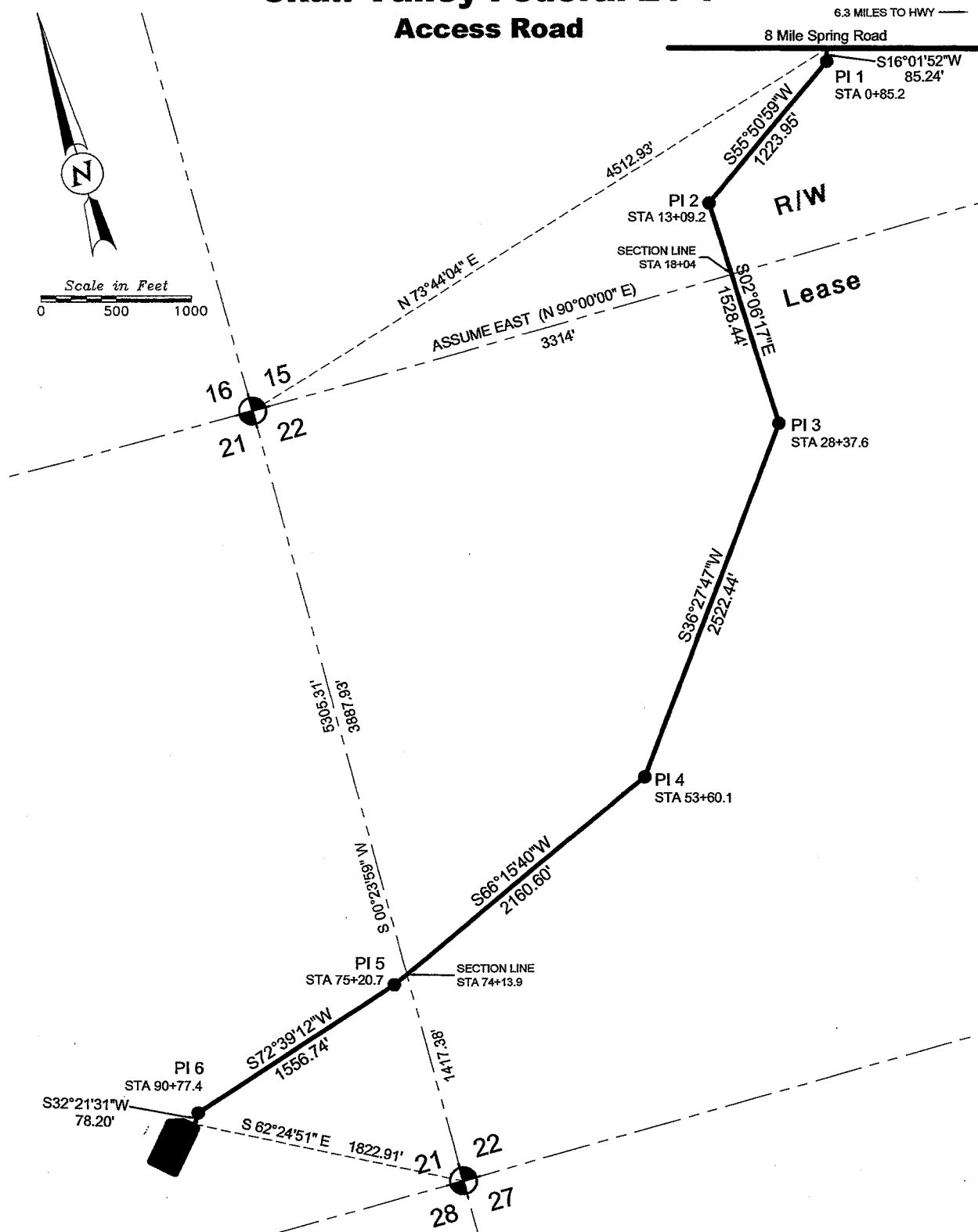


Map created with TOPO!® ©2003 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))



**ANDERSON**  
 ENGINEERING COMPANY INC.

## Skull Valley Federal 21-1 Access Road





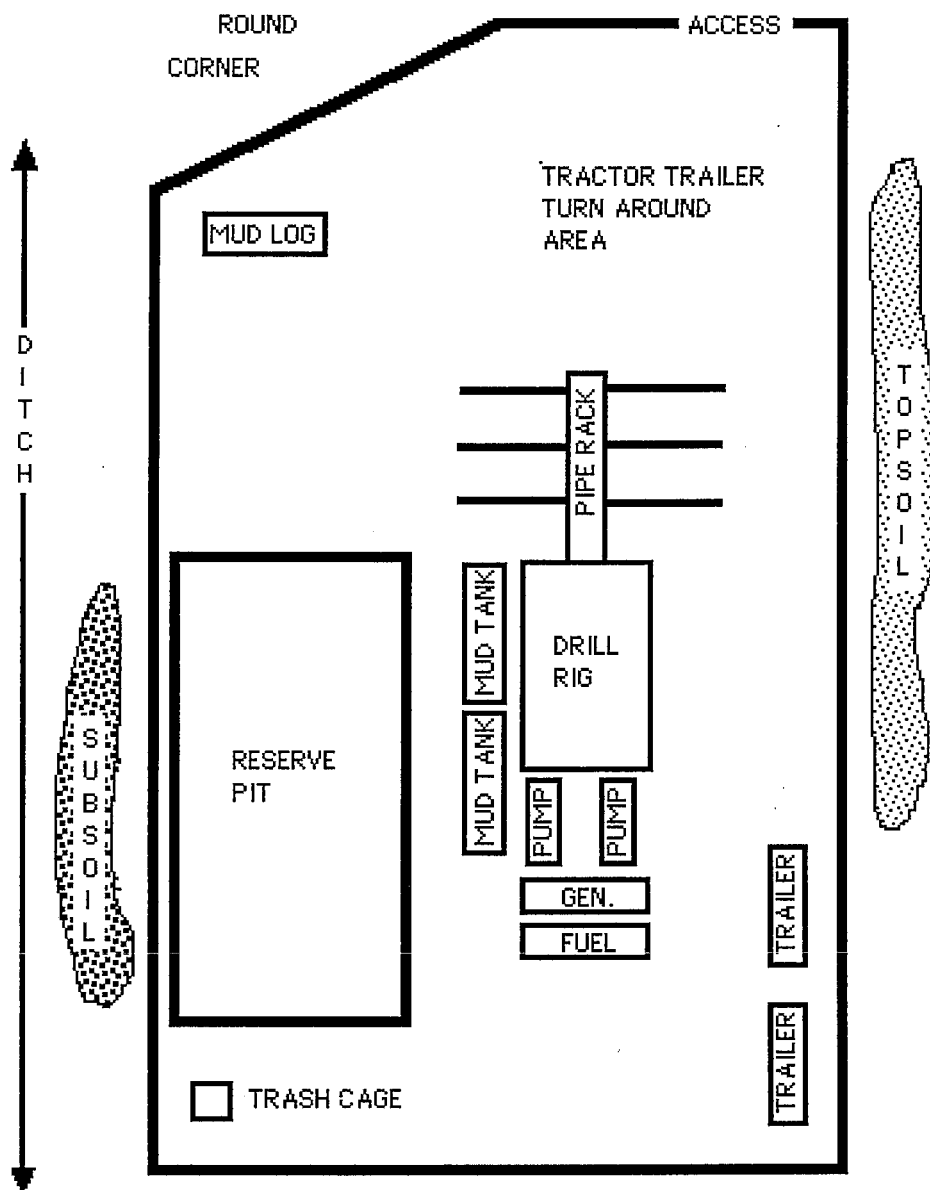
Geochem Exploration, LLC  
Skull Valley Federal 21-1  
738' FSL & 1792' FEL  
Sec. 21, T. 3 S., R. 9 W.  
Tooele County, Utah

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NORTH



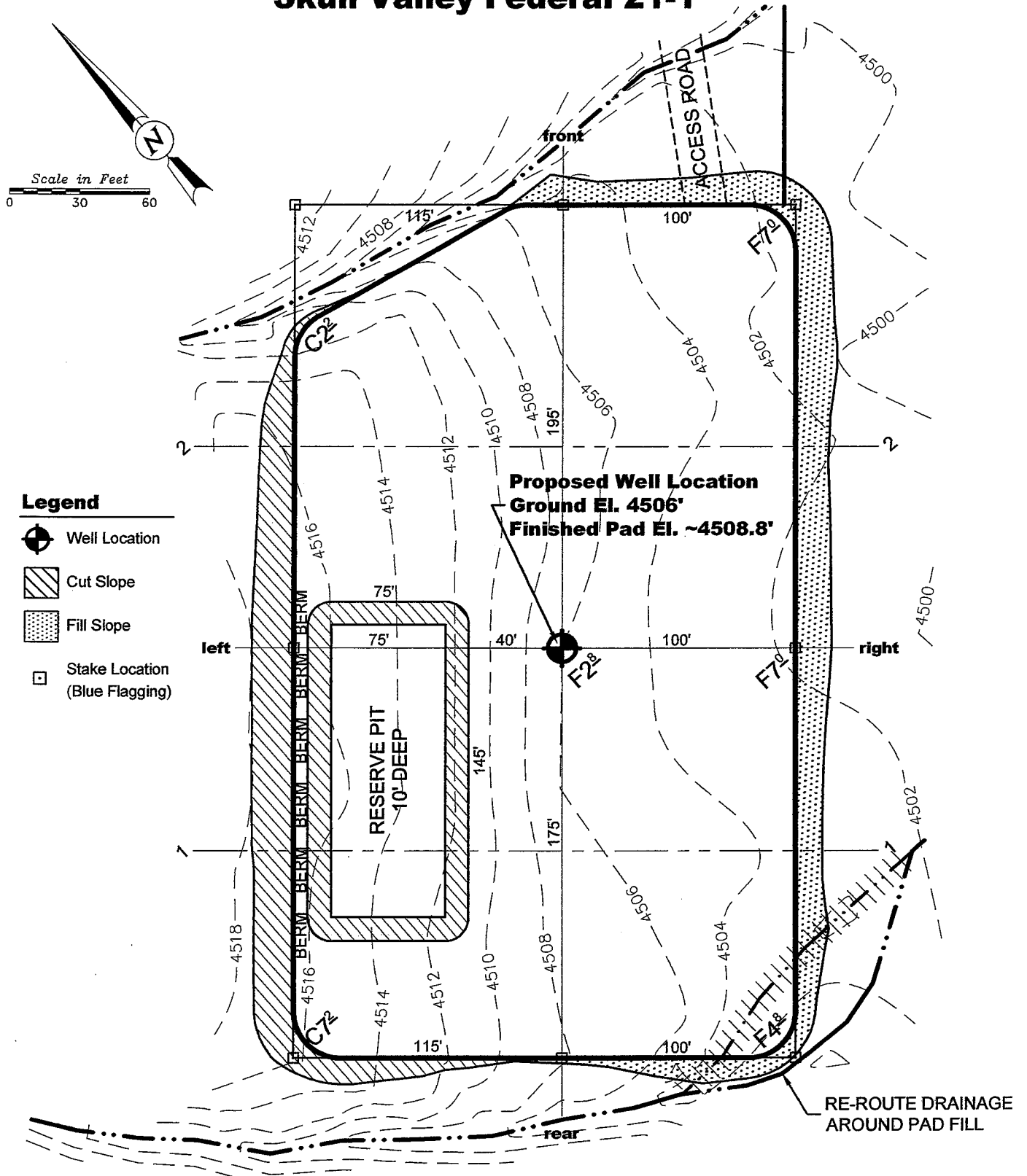
1" ≈ 60'





**ANDERSON**  
ENGINEERING COMPANY INC.

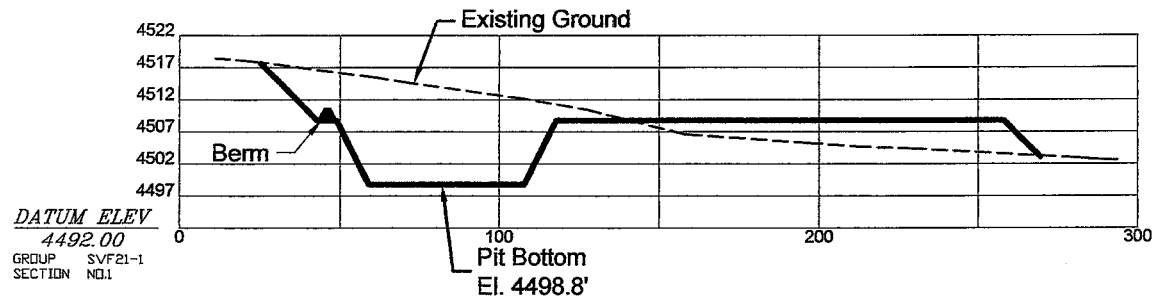
## Skull Valley Federal 21-1



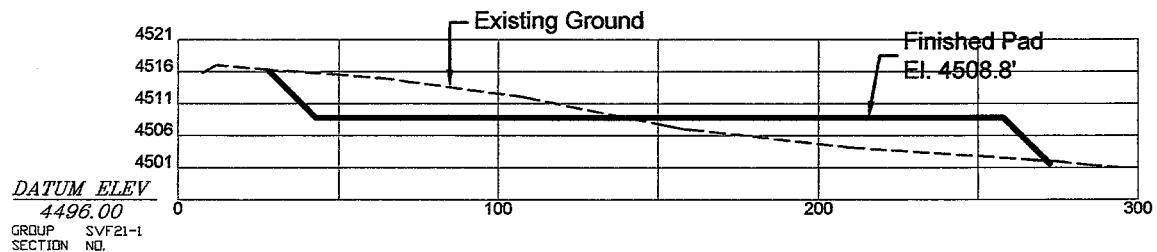




## Skull Valley Federal 21-1



**Section 1-1**



**Section 2-2**

### **Earthwork Summary**

Cut: 8541 cubic yards  
Fill: 7312 cubic yards  
Net: 1229 cubic yards  
Anticipated Shrink 15%

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 04/16/2007

API NO. ASSIGNED: 43-045-30031

WELL NAME: SKULL VLY FED 21-1

OPERATOR: GEOCHEM EXPLORATION, ( N3160 )

PHONE NUMBER: 505-466-8120

CONTACT: BRIAN WOOD

PROPOSED LOCATION:

SWSE 21 030S 090W

SURFACE: 0738 FSL 1792 FEL

BOTTOM: 0738 FSL 1792 FEL

COUNTY: TOOELE

LATITUDE: 40.53774 LONGITUDE: -112.8634

UTM SURF EASTINGS: 342184 NORTHINGS: 4488901

FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-079160

PROPOSED FORMATION: DVNN

SURFACE OWNER: 1 - Federal

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat

☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. UTB000253 )

☒ Potash (Y/N)

☒ Oil Shale 190-5 (B) or 190-3 or 190-13

☒ Water Permit  
(No. 16-127 )

☒ RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )

☒ Fee Surf Agreement (Y/N)

☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

\_\_\_\_ R649-2-3.

Unit: \_\_\_\_\_

☒ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

\_\_\_\_ R649-3-3. Exception

\_\_\_\_ Drilling Unit

Board Cause No: \_\_\_\_\_

Eff Date: \_\_\_\_\_

Siting: \_\_\_\_\_

\_\_\_\_ R649-3-11. Directional Drill

COMMENTS: \_\_\_\_\_

STIPULATIONS: \_\_\_\_\_

*1- Federal Approval*  
*2- Spacing Map*

T3S R9W

17

16

15

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21

22

SKULL VLY FED 21-1



29

28

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OPERATOR: GEOCHEM EXPL LLC (N3160)

SEC: 21 T.3S R.9W

FIELD: WILDCAT (001)

COUNTY: TOOELE

SPACING: R649-3-2 / GENERAL SITING

#### Field Status

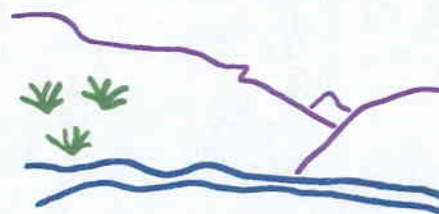
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

#### Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

#### Wells Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING



*Utah Oil Gas and Mining*



PREPARED BY: DIANA MASON  
DATE: 20-APRIL-2007



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

April 23, 2007

Geochem Exploration, LLC  
P O Box 356  
Casper, WY 82602

Re: Skull Valley Federal 21-1 Well, 738' FSL, 1792' FEL, SW SE, Sec. 21,  
T. 3 South, R. 9 West, Tooele County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-045-30031.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Tooele County Assessor  
Bureau of Land Management, Salt Lake Office

Operator: Geochem Exploration, LLC  
Well Name & Number Skull Valley Federal 21-1  
API Number: 43-045-30031  
Lease: UTU-079160

Location: SW SE                      Sec. 21                      T. 3 South                      R. 9 West

### Conditions of Approval

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

Notify the Division with 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281 office  
(801) 733-0983 home

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

#### 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

#### 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **GEOCHEM EXPLORATION, LLC**3a. Address  
**P. O. BOX 356, CAPSER, WY 82602**3b. Phone No. (include area code)  
**307 266-4409**4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**738' FSL & 1792' FEL 21-3S-9W SLM**

5. Lease Serial No.

**UTU-079160**

6. If Indian, Allottee or Tribe Name

**N/A**

7. If Unit or CA/Agreement, Name and/or No.

**N/A**

8. Well Name and No.

**SKULL VALLEY FEDERAL 21-1**

9. API Well No.

**43-045-30031**

10. Field and Pool, or Exploratory Area

**WILDCAT**

11. County or Parish, State

**TOOELE COUNTY, UT****12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**Will change bottom 1,000' of long string from 23# to 26#. See attached worksheet.**

**Attached sketch shows interim reclamation & location of proposed production facilities.**

**Topsoil from road will be windrowed beside the road.**

**Road will be crowned, ditched, and rock surfaced before drilling.**

**Rock surface will be 6" - 8" pit run hauled from private land near Grantsville.**

**RECEIVED****MAY 31 2007****DIV. OF OIL, GAS & MINING**

COPY SENT TO OPERATOR

Date: 6-19-07  
Initials: RM

cc: BLM, Merschat, UDOGM

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**BRIAN WOOD****(PHONE 505 466-8120)**Title **CONSULTANT****(FAX 505 466-9682)**

Signature

Date

**05/26/2007****THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Accepted by the  
Utah Division of  
Oil, Gas and Mining

Date

Federal Approval Of This  
Action Is Necessary

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within the jurisdiction of such department or agency.

(Instructions on page 2)

By: [Signature]

**Casing Design Worksheet - GEOCHEM EXPLORATION, Tooele County, Utah**  
21-3S-9W

Surface Casing									
Size	Grade	#/foot	Collapse	Yield	Tensile	Coupling	Length	Weight	Mud Wt
9.625	J-55	36	2020	3520	394	ST&C	750	27,000	9
Production Casing									
Size	Grade	#/foot	Collapse	Yield	Tensile	Coupling	Length	Weight	Mud Wt
7	N-80	23	3830	6340	442	LT&C	6,500	149,500	9
7	N-80	26	5410	7240	519	LT&C	1,000	26,000	-
Totals:							7,500	175,500	

**Casing Parameters**  
Tensile

SF , = Tensile / ; Must Exceed 1.8 for Dry or 1.6 for Bouyant

9.625	Surf.	394000 /	27,000	=	14.6
7	Prod.	442000 /	175,500	=	2.5

**Collapse**

SF , = Collapse / (Maximum Formation Pressure) or (Mud Gradient X T. V. D.); Must Exceed 1.125

9.625	Surf.	2020 /	350.60	=	5.8	
7	Prod.	5410 /	3,505.95	=	1.5	(1.3 @ base of 23# 7")

**Burst**

SF , = Burst / (Maximum Formation Pressure) or (Mud Gradient X T. V.D.); Must Exceed 1.0

9.625	Surf.	3520 /	350.60	=	10.0
7	Prod.	6340 /	3,505.95	=	1.8

Anticipated Bottom Hole Pressure (ABHP) = 3375 psi estimated  
T.V.D. X Mud Wt. X 0.05194 = Hydrostatic Head :

**Mud Weight at the Casing Shoe:**

Surface	350.60
Intermediate	3,505.95

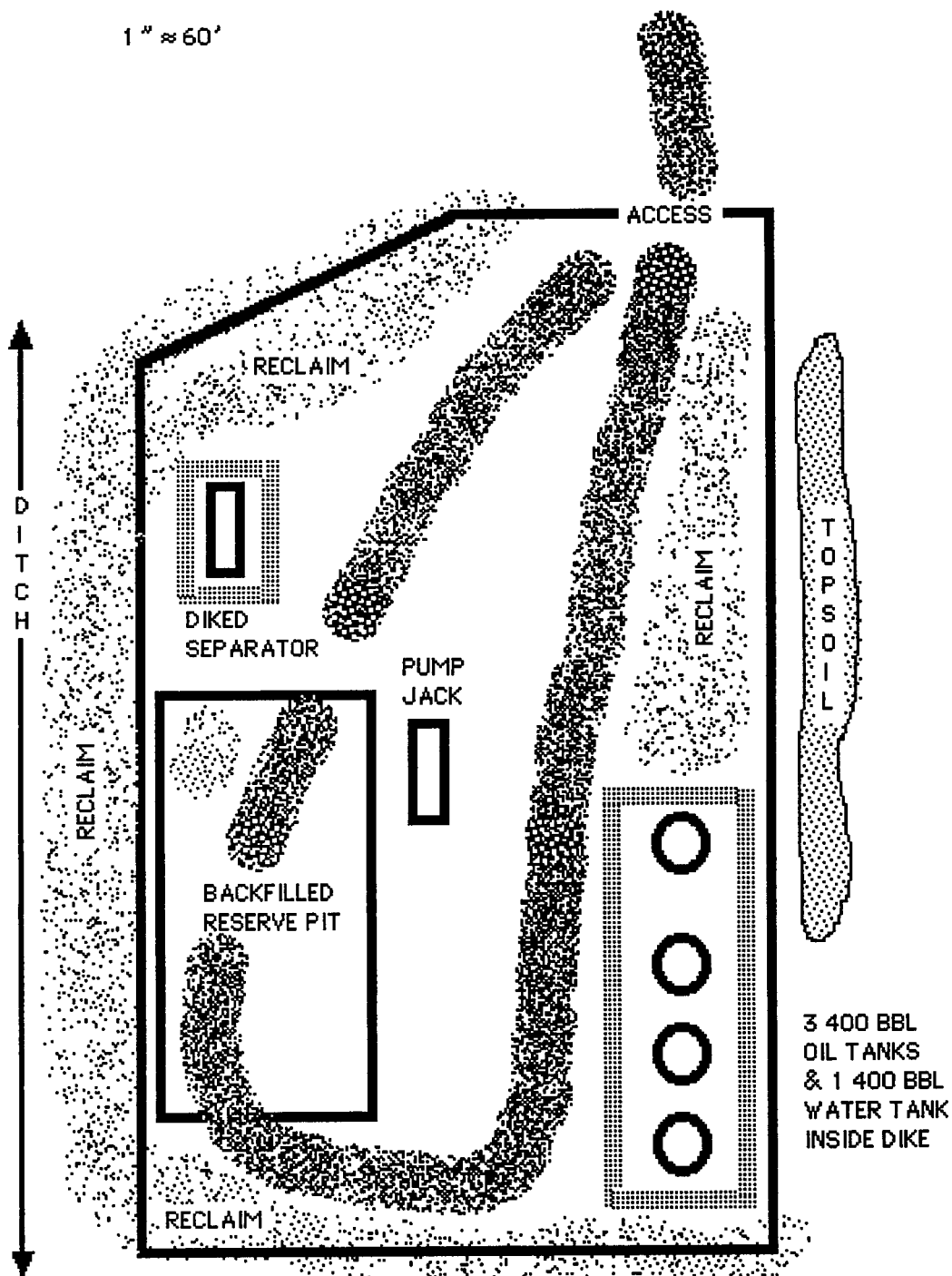
NORTH



1"  $\approx$  60'

# INTERIM RECLAMATION & PRODUCTION FACILITIES

GRAVEL ROAD





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
APR 07 2008

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
UTU-079160

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE** - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
GEOCHEM EXPLORATION, LLC

3a. Address  
P.O. BOX 356, CASPER, WY 82602

3b. Phone No. (include area code)  
(307) 266-4409

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
738' FSL & 1792' FEL 21-3S-9W SLM

7. If Unit of CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
SKULL VALLEY FEDERAL 21-1

9. API Well No.  
43-045-30031

10. Field and Pool or Exploratory Area  
WILDCAT

11. Country or Parish, State  
TOOELE, UT

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other RENEW APD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

PLEASE RENEW APD FOR 1 YEAR. TRYING OBTAIN RIG FOR REMOTE LOCATION.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 04-09-08

By: [Signature]

COPY SENT TO OPERATOR

Date: 4.14.2008

Initials: KS

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
KITTY WOOD

Signature

[Signature: Kitty Wood]

Title CONSULTANT

Date 03/28/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 43-045-30031  
**Well Name:** SKULL VALLEY FEDERAL 21-1  
**Location:** SWSE 21-3S-9W SLM  
**Company Permit Issued to:** GEOCHEM EXPLORATION, LLC  
**Date Original Permit Issued:** ~~2/27/2005~~ 4/23/07

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐ N/A

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

Kitty Wood  
Signature  
Title: CONSULTANT

3/28/2008  
Date

Representing: GEOCHEM EXPLORATION, LLC

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-079160
2. Name of Operator GEOCHEM EXPLORATION, LLC		6. If Indian, Allottee or Tribe Name N/A
3a. Address P. O. BOX 356, CAPSER, WY 82602	3b. Phone No. (include area code) 307 266-4409	7. If Unit or CA/Agreement, Name and/or No. N/A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 738' FSL & 1792' FEL 21-3S-9W SLM		8. Well Name and No. SKULL VALLEY FEDERAL 21-1
		9. API Well No. 43-045-30031
		10. Field and Pool, or Exploratory Area WILDCAT
		11. County or Parish, State TOOELE COUNTY, UT

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Request APD approval be extended for 2 years. 1 YEAR  
Anticipate spudding well late summer 2009.

Approved by the  
Utah Division of  
Oil, Gas and Mining

cc: BLM, Merschat, UDOGM

COPY SENT TO OPERATOR

Date: 4.28.2009  
Initials: KS

Date: 04-27-09

By: [Signature]

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

BRIAN WOOD

(PHONE 505 466-8120)

Title CONSULTANT

(FAX 505 466-9682)

Signature

Date

04/20/2009

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

(Instructions on page 2)

APR 22 2009

DIV OF OIL, GAS &amp; MINING

RESET

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 43-045-30031  
**Well Name:** SKULL VALLEY FEDERAL 21-1  
**Location:** SWSE 21-3S-9W, TOOELE COUNTY  
**Company Permit Issued to:** GEOCHEM EXPLORATION, LLC  
**Date Original Permit Issued:** 4/23/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

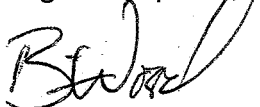
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
\_\_\_\_\_  
Signature

4/20/2009  
\_\_\_\_\_  
Date

Title: Consultant

Representing: Geochem Exploration, LLC

**RECEIVED**

**APR 22 2009**

DIV. OF OIL, GAS & MINING

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

ROUTING	
1. DJJ	
2. CDW	

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

**9/15/2009**

<b>FROM: (Old Operator):</b> N3160-Geochem Exploration, LLC PO Box 356 Casper, WY 82602  Phone: 1 (307) 266-4409	<b>TO: ( New Operator):</b> N3615-V.A. Resources, LLC PO Box 50790 Casper, WY 82605  Phone: 1 (307) 473-1407
---	---

CA No.				Unit:				
WELL NAME	SEC TWN RNG			API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SKULL VLY FED 21-1	21	030S	090W	4304530031		Federal	OW	APD

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 9/23/2009
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 9/23/2009
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 9/23/2009
- a. Is the new operator registered in the State of Utah: Business Number: 7450497-0161
- a. (R649-9-2)Waste Management Plan has been received on: requested 9/30/09
- b. Inspections of LA PA state/fee well sites complete on: n/a
- c. Reports current for Production/Disposition & Sundries on: n/a
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA n/a
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 9/30/2009
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/30/2009
- Bond information entered in RBDMS on: n/a
- Fee/State wells attached to bond in RBDMS on: n/a
- Injection Projects to new operator in RBDMS on: n/a
- Receipt of Acceptance of Drilling Procedures for APD/New on: 9/30/2009

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UTB000253
- Indian well(s) covered by Bond Number: n/a
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number n/a
- b. The **FORMER** operator has requested a release of liability from their bond on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**COMMENTS:**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
DIV. OF OIL, GAS & MINING

RECEIVED

SEP 23 2009

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires: January 31, 2004

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator VA RESOURCES, LLC N3615

3a. Address P.O. BOX 50790, CASPER, WY 82605

3b. Phone No. (include area code) 307-473-1407

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
738' FSL & 1792' FEL 21-3S-9W SLM

5. Lease Serial No.  
UTU-079160

6. If Indian, Allottee or Tribe Name  
N/A

7. If Unit or CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
SKULL VALLEY FEDERAL 21-1

9. API Well No.  
43-045-30031

10. Field and Pool, or Exploratory Area  
WILDCAT

11. County or Parish, State  
TOOELE COUNTY, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Operator Change
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Geochem Exploration, LLC hereby assigns all rights and title in this well to VA Resources, LLC.

ASSIGNOR:

W.G. R. M. EY - PRESIDENT 9-15-09

N3160  
PO BOX 356  
CASPER WY 82602  
307 266-4409

VA Resources, LLC hereby accepts assignment of and full responsibility for all terms and conditions of BLM and UDOGM approval for this well from Geochem Exploration, LLC. ASSIGNEE:

W.N. McMURRY MANAGING MEMBER 9/15/09

BLM BOND UTB000253

cc: BLM (FO & SQ), UDOGM

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

KITTY WOOD (PHONE 505-466-8120)

Title CONSULTANT

(FAX 505-466-9682)

Signature

Date

9-14-09

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

APPROVED 9/30/2009

Earlene Russell  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**Request to Transfer Application or Permit to Drill**

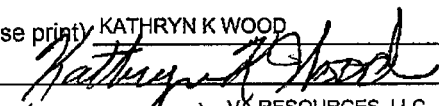
(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

<b>Well name:</b>	SKULL VALLEY FEDERAL 21-1
<b>API number:</b>	4304530031
<b>Location:</b>	Qtr-Qtr: SWSE    Section: 21    Township: 3S    Range: 9W
<b>Company that filed original application:</b>	GEOCHEM EXPLORATION, LLC
<b>Date original permit was issued:</b>	04/23/2007
<b>Company that permit was issued to:</b>	GEOCHEM EXPLORATION, LLC

Check one	Desired Action:
<input type="checkbox"/>	Transfer pending (unapproved) Application for Permit to Drill to new operator
<input type="checkbox"/>	The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application.
<input checked="" type="checkbox"/>	Transfer approved Application for Permit to Drill to new operator
<input type="checkbox"/>	The undersigned as owner with legal rights to drill on the property as permitted, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.	Yes	No
If located on private land, has the ownership changed?		
<input type="checkbox"/> If so, has the surface agreement been updated?		
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?		✓
Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?		✓
Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location?		✓
Has the approved source of water for drilling changed?		✓
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?		✓
Is bonding still in place, which covers this proposed well? Bond No. <u>BLM UTB000253</u>		✓

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

Name (please print) KATHRYN K WOOD  
Signature   
Representing (company name) VX RESOURCES, LLC

Title CONSULTANT  
Date 09/30/2009

**RECEIVED**

**SEP 30 2009**

**DIV. OF OIL, GAS & MINING**

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

## DIVISION OF OIL, GAS AND MINING

### SPUDDING INFORMATION

Name of Company: VA RESOUCES, LLC

Well Name: SKULL VLY FED 21-1

Api No: 43-045-30031 Lease Type: FEDERAL

Section 21 Township 03S Range 09W County TOOELE

Drilling Contractor CRAIG'S ROUSTABOUT SERV RIG # BUCKET

### SPUDDED:

Date 10/14/2009

Time 9:30 AM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by JEFF BENNET

Telephone # (307) 259-5555

Date 10/15/2009 Signed CHD



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

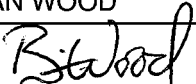
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-079160
2. NAME OF OPERATOR: VA RESOURCES, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: P.O. BOX 50790 CITY CASPER STATE WY ZIP 82605		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (307) 473-1407		8. WELL NAME and NUMBER: SKULL VALLEY FEDERAL 21-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 738' FSL & 1792' FEL		9. API NUMBER: 4304530031
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSE 21 3S 9W S		10. FIELD AND POOL, OR WILDCAT: WILDCAT
		COUNTY: TOOELE
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 10/14/2009	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: SPUD
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Craig's Roustabout Service dry spudded well at 0930 10/14/2009.  
Verbally reported 10/15/2009 by Jeff Bennet (307 259-5555).

NAME (PLEASE PRINT) BRIAN WOOD	phone: (505) 466-8120	TITLE CONSULTANT
SIGNATURE 		DATE 10/30/2009

(This space for State use only)

RECEIVED  
NOV 02 2009  
DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: VA RESOURCES, LLC Operator Account Number: N 3615  
Address: P. O. BOX 50790  
city CASPER  
state WY zip 82605 Phone Number: (307) 743-1407

**Well 1**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304530031	SKULL VALLEY FEDERAL 21-1	SWSE	21	3S	9W	TOOELE
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
A	99999	17396	10/14/2009		11/10/09	
<b>Comments:</b> <u>DUNN</u> PREVIOUS ENTITY: GEOCHEM EXPLORATION, LLC N3160						

**Well 2**

API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
<b>Comments:</b>						

**Well 3**

API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
<b>Comments:</b>						

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

BRIAN WOOD Phone: (505) 466-8120

Name (Please Print)

Signature

CONSULTANT

Title

10/30/2009

Date

**RECEIVED**

**NOV 02 2009**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires: January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

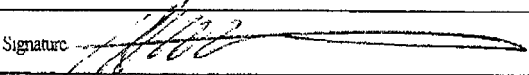
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-079160
2. Name of Operator VA RESOURCES, LLC (OPERATOR #N3615)		6. If Indian, Allottee or Tribe Name N/A
3a. Address P.O. BOX 50790 CASPER, WY	3b. Phone No. (include area code) 307-473-1407	7. If Unit or CA/Agreement, Name and/or No. N/A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 738' FSL & 1792' FEL S21-3S-9W SLM		8. Well Name and No. SKULL VALLEY FEDERAL 21-1
		9. API Well No. 43-045-30031
		10. Field and Pool, or Exploratory Area WILDCAT
		11. County or Parish, State TOOELE COUNTY, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input checked="" type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Due to cutting a reverse fault, we are electing to change our TD depth from 7500' to 9000' in attempt to reach the Devonian.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Reed Merschat		Title Consultant
Signature 		Date 12/01/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires: January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**


1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No <b>UTU-079160</b>
2. Name of Operator <b>VA RESOURCES, LLC (OPERATOR #N3615)</b>		6. If Indian, Allottee or Tribe Name <b>N/A</b>
3a. Address <b>P.O. BOX 50790 CASPER, WY</b>	3b. Phone No. (include area code) <b>307-473-1407</b>	7. If Unit or CA/Agreement, Name and/or No <b>N/A</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>738' FSL &amp; 1792' FEL S21-3S-9W SLM</b>		8. Well Name and No <b>SKULL VALLEY FEDERAL 21-1</b>
		9. API Well No. <b>43-045-30031</b>
		10. Field and Pool, or Exploratory Area <b>WILDCAT</b>
		11. County or Parish, State <b>TOOELE COUNTY, UT</b>

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

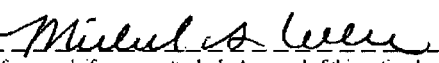
TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Leaving rig stacked</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**VA Resources will be leaving DHS Rig #11 stacked on location for 3 to 4 weeks until it will be mobilized to Nevada.**

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>Reed Merschat</b>		Title <b>Consultant</b>
Signature 		Date <b>12/08/2009</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by 	Title <b>AFM</b>	Date <b>12/10/2009</b>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office <b>Salt Lake Field Office</b>	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an**  
**abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
UTU-079160

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
VA RESOURCES, LLC (OPERATOR #N3615)

3a. Address  
P.O. BOX 50790 CASPER, WY 82605

3b. Phone No. (include area code)  
307-473-1407

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
738' FSL & 1792' FEL S21-3S-9W SLM

7. If Unit of CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
SKULL VALLEY FEDERAL 21-1

9. API Well No.  
43-045-30031

10. Field and Pool or Exploratory Area  
WILDCAT

11. Country or Parish, State  
TOOELE COUNTY, UT

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input checked="" type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

We have elected to Temporarily Abandon (TA) pending further acquisition and evaluation of electric logs and other science to determine if sidetracking is a viable option.

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)  
Reed Merschat

Title Consultant

Signature

Date 03/03/2010

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

*Michael J. Cullen*

Title

AFOM

Date

3-11-2010

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



## United States Department of the Interior

BUREAU OF LAND MANAGEMENT



### CONDITIONS OF APPROVAL FOR TEMPORARY ABANDONMENT

Operator: VA Resources, LLC

Well: Skull Valley Fed #21-1  
SW SE Sec. 21, T3S, R9W  
Tooele County, Utah  
UTU-79160

**This office received your Sundry Notice dated March 3, 2010 proposing TA status until further well evaluation can be completed.**

**Be advised this approval is not a permanent status change.**

1. The regulation at 43 CFR § 3162.3-4 specifies: "When justified by the operator, the AO may authorize a delay, no one of which may exceed an **additional 12 months.**"
2. Therefore your TA approval WILL EXPIRE March 1, 2011.
3. Prior to March 1, 2011, VA Resources, LLC. shall:
  - ☐ Submit a proposal to redrill this well and establish production; or
  - ☐ Submit a proposal to permanently plug and abandon this well.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an**  
**abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
UTU-079160

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
VA RESOURCES, LLC (OPERATOR #N3615)

3a. Address  
P.O. BOX 50780 CASPER, WY 82605

3b. Phone No. (include area code)  
307-473-1407

7. If Unit of CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
SKULL VALLEY FEDERAL 21-1

9. API Well No.  
43-045-30031

10. Field and Pool or Exploratory Area  
WILDCAT

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
738' FSL & 1792' FEL S21-3S-9W SLM

11. Country or Parish, State  
TOOELE COUNTY, UT

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other SRA
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Subsequent Report of Abandonment. We have elected to Temporarily Abandon pending further acquisition and evaluation of electric logs and other science to determine if sidetracking is a viable option. Wellbore diagram attached.

14. I hereby certify that the foregoing is true and correct.  
Name (Printed/Typed)

Reed Merschat

Title Consultant

Signature

Date 03/03/2010

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

*Michael S. Cullen*

Title

*AFOM*

Date

*03-11-2010*

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

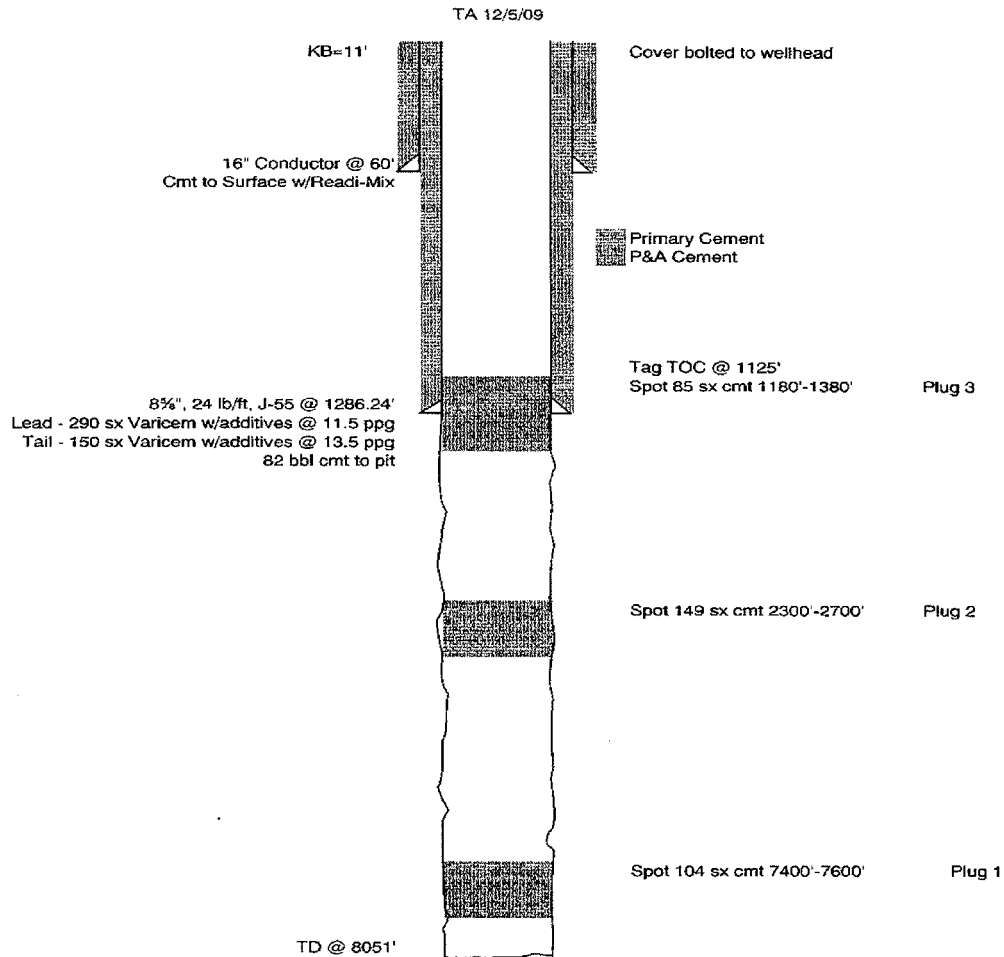
Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

## VA RESOURCES

**SKULL VALLEY FEDERAL 21-1**  
 738' FSL, 1792' FEL, SWSE, Sec 21, T3S, R9W  
 Tooele County, Utah  
 API# 043-045-30031



Plug 1: 104 sx Class "G" w/no additives @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

Plug 2: 149 sx Class "G" w/no additives @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

Plug 3: 85 sx Class "G" w/2% CaCl<sub>2</sub> @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

SRC 1/4/10



SUBSEQUENT REPORT OF WELL ABANDONMENT  
CONDITIONS OF APPROVAL

Operator: VA Resources, LLC

Well: Skull Valley Fed. # 21-1  
SW¼ SE¼ Sec. 21, T. 36 S., R. 1 E. SLB&M  
Tooele County, Utah  
UTU-79160

1. Approval of this Sundry Notice does not relieve VA Resources, LLC. of the responsibility to complete plugging of the referenced wellbore and rehabilitate the surface in accordance with the approved Application for Permit to Drill and the BLM. This is not approval of final abandonment.
2. Surface restoration shall be in conformance with the Surface Use Plan of Operation.
3. You or your authorized representative should inspect the abandoned location prior to notification to this office by Form 3160-5, Final Abandonment Notice (FAN), that the location is ready for final inspection, and note especially that:
  - A. The regulation dry-hole marker bears the correct information (**unless waived by the BLM Salt Lake Field Office**).
  - B. The rathole and mousehole are filled, not just bridged, and pits are filled and leveled.
  - C. All material and junk are gone. This includes anchors protruding above ground.
  - D. Reseeding and other required rehabilitation work has been completed.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
***Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.***

5. Lease Serial No.  
UTU-079160

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
VA RESOURCES, LLC (OPERATOR #N3615)

3a. Address  
P.O. BOX 50790 CASPER, WY 82605

3b. Phone No. (include area code)  
307-472-2885

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
738' FSL & 1792' FEL S21-3S-9W SLM

7. If Unit of CA/Agreement, Name and/or No.  
N/A

8. Well Name and No.  
SKULL VALLEY FEDERAL 21-1

9. API Well No.  
43-045-30031

10. Field and Pool or Exploratory Area  
WILDCAT

11. Country or Parish, State  
TOOELE COUNTY, UT

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input checked="" type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The pit will be back-filled, well site and access road will be ripped and contoured to match surrounding contours and the reserved topsoil evenly spread. The cattle guard will be removed and its area back-filled. Disturbed areas will be ripped before seeding. Seed will be broadcast in October or November with a BLM approved mix. Seeded areas will be harrowed and left rough after seeding.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Reed Merschat

Title Consultant

Signature

Date 10/14/2010

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8  
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-079160
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR: VA Resources, Inc.		7. UNIT or CA AGREEMENT NAME
3. ADDRESS OF OPERATOR: P.O. Box 50790 CITY Casper STATE WY ZIP 82605		8. WELL NAME and NUMBER: Skull Valley Federal 21-1
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 738 FSL 1792 FEL AT TOP PRODUCING INTERVAL REPORTED BELOW: NA AT TOTAL DEPTH: 735 fsl 2001 fel bnl by HSM		9. API NUMBER: 4304530031
10. FIELD AND POOL, OR WILDCAT Wildcat		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNE 21 3S 9W
12. COUNTY Tooele		13. STATE UTAH
14. DATE SPUDDED: 10/14/2009	15. DATE T.D. REACHED: 11/30/2009	16. DATE COMPLETED: 4/5/2011
17. ELEVATIONS (DF, RKB, RT, GL): 4531 KB, 4506 GL		18. TOTAL DEPTH: MD 8.051 TVD 8.040
19. PLUG BACK T.D.: MD 0 TVD 0		20. IF MULTIPLE COMPLETIONS, HOW MANY? * None
21. DEPTH BRIDGE MD PLUG SET: TVD		22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)		

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	16" LP		0	60		25		0	
12.25"	8 5/8 J55	24lb	0	1,289		290		0	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

29. ENCLOSED ATTACHMENTS: <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input checked="" type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION		<input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS		<input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: _____		<input checked="" type="checkbox"/> DIRECTIONAL SURVEY	
30. WELL STATUS: P&A RECEIVED							

## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)

## 35. ADDITIONAL REMARKS (Include plugging procedure)

Spot 104 sx cmt 7400"-7600". Spot 104 sx cmt 2300"-2700". Spot 85 sx cmt 1180"-1360". Spot 25 sx cmt 0"-60". See attached wellbore diagram. Well cemented per BLM requirements.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Jeffrey BennettTITLE ConsultantSIGNATURE DATE 12/15/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

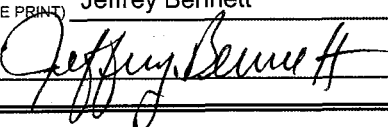
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-079160
2. NAME OF OPERATOR: VA Resources, Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 50790 CITY Casper STATE WY ZIP 82605		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 738 FSL 1792 FEL		8. WELL NAME and NUMBER: Skull Valley Federal 21-1
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNE 21 3S 9W		9. API NUMBER: 4304530031
COUNTY: Tooele		10. FIELD AND POOL, OR WILDCAT: Wildcat
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 4/5/2011	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Spot 104 sx cmt 7400"-7600". Spot 104 sx cmt 2300"-2700". Spot 85 sx cmt 1180"-1360". Spot 25 sx cmt 0"-60". See attached wellbore diagram. Well cemented per BLM requirements.

NAME (PLEASE PRINT) Jeffrey Bennett	TITLE Consultant
SIGNATURE 	DATE 12/15/2011

(This space for State use only)

RECEIVED

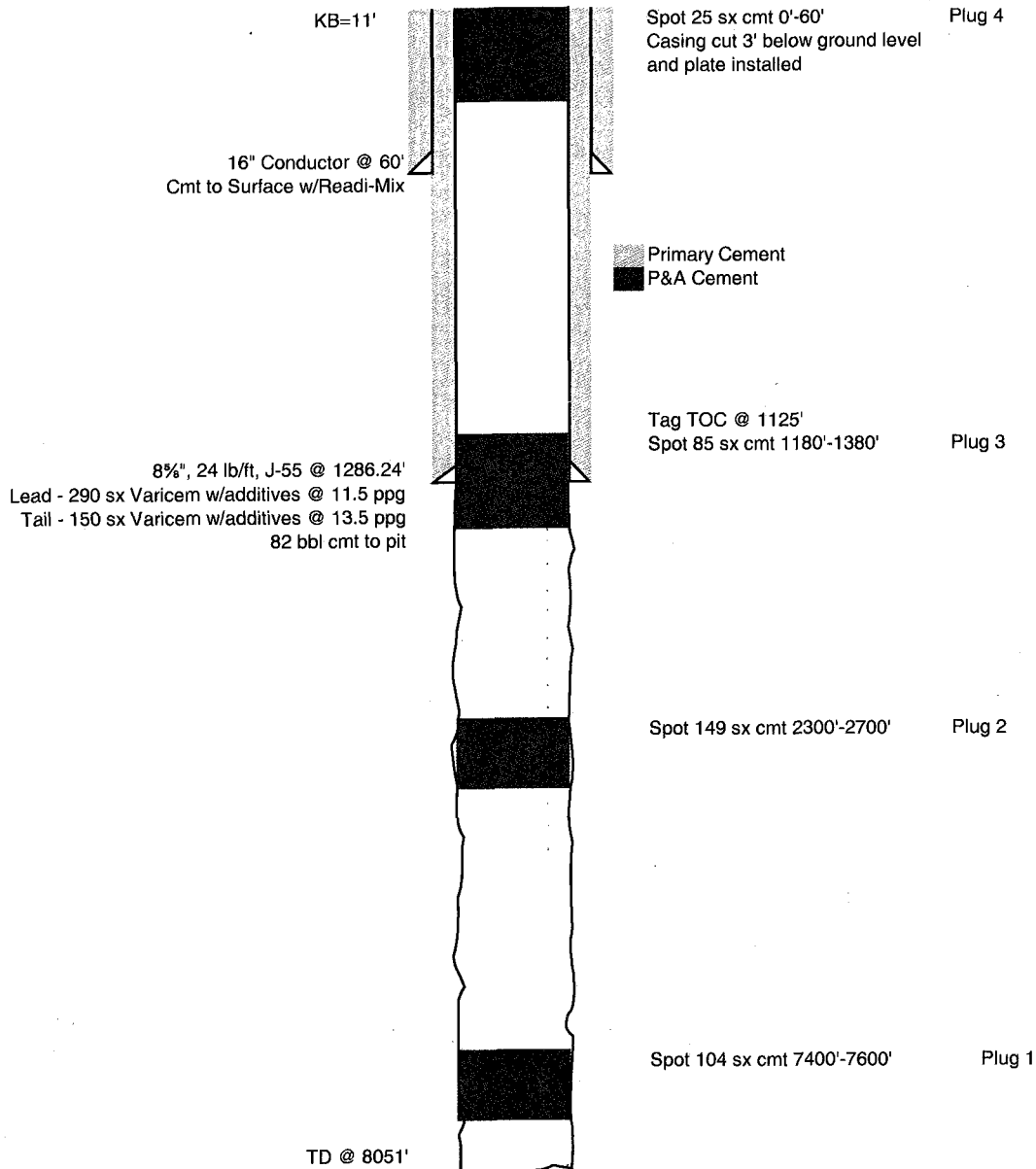
JAN 03 2012

DIV. OF OIL, GAS & MINING

# VA RESOURCES

**SKULL VALLEY FEDERAL 21-1**  
738' FSL, 1792' FEL, SWSE, Sec 21, T3S, R9W  
Tooele County, Utah  
API# 043-045-30031

FINAL P&A  
4/5/2011

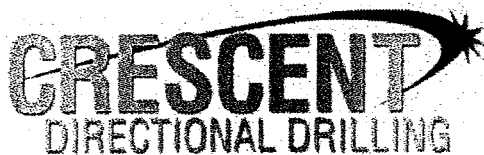


Plug 1: 104 sx Class "G" w/no additives @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

Plug 2: 149 sx Class "G" w/no additives @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

Plug 3: 85 sx Class "G" w/2% CaCl<sub>2</sub> @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft

Plug 4: 25 sx Type III w/no additives @ 15.8 ppg, Yield = 1.15 ft<sup>3</sup>/ft



## **V. A. Resources**

**Skull Valley**

**Federal 21-1**

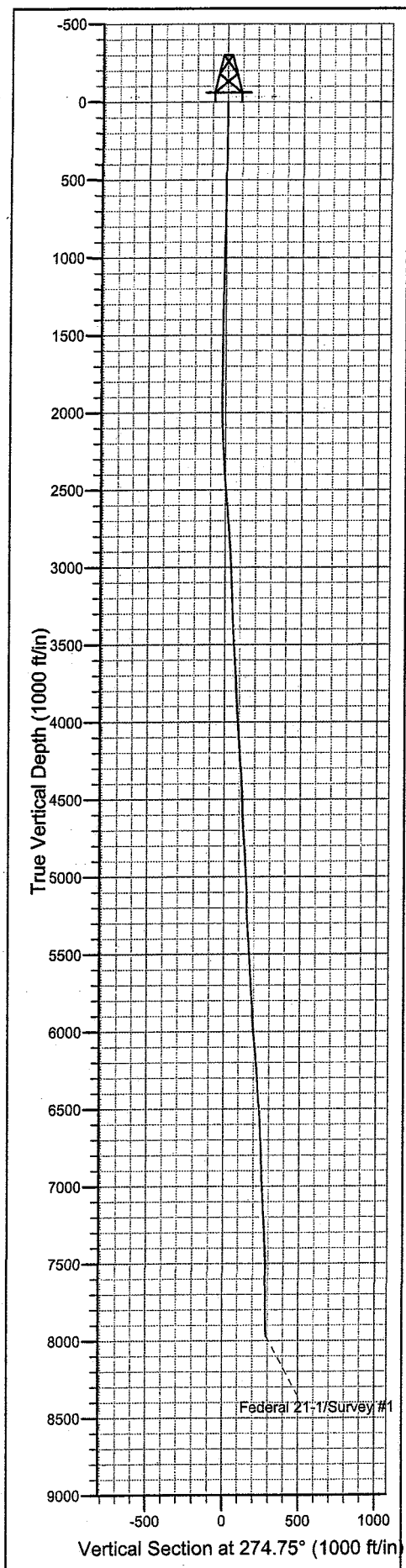
**Federal 21-1**

**Wellbore #1**

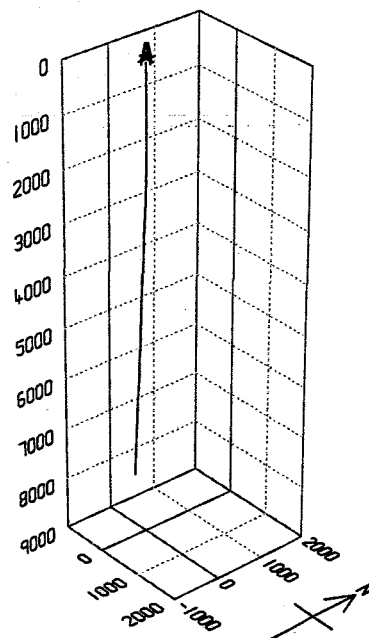
**Survey: Survey #1**

## **Standard Survey Report**

**08 December, 2009**



**CRESCENT**  
DIRECTIONAL DRILLING



### V. A. Resources

Federal 21-1  
Skull Valley

Geodetic System: US State Plane 1983

Zone: Utah Central Zone

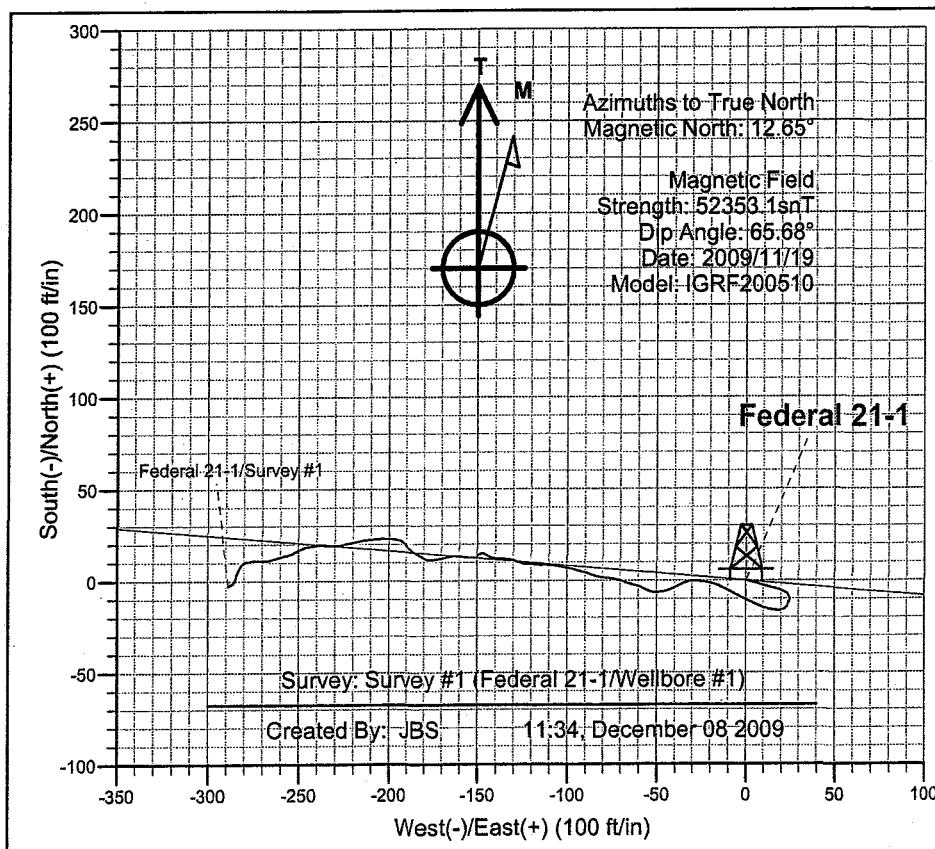
WELL @ 0.0ft (Original Well Elev)

Ground Level: 0.0

Latitude: 40° 32' 15.780 N

Longitude: 112° 51' 51.900 W

Magnetic North is 12.65° East of True North (Magnetic Declination)





# Survey Report

<b>Company:</b>	V. A. Resources	<b>Local Co-ordinate Reference:</b>	Well Federal 21-1
<b>Project:</b>	Skull Valley	<b>TVD Reference:</b>	WELL @ 0.0ft (Original Well Elev)
<b>Site:</b>	Federal 21-1	<b>MD Reference:</b>	WELL @ 0.0ft (Original Well Elev)
<b>Well:</b>	Federal 21-1	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db

<b>Project</b>	Skull Valley		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Utah Central Zone		

<b>Site</b>	Federal 21-1		
<b>Site Position:</b>		<b>Northing:</b>	7,367,494.43ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,261,197.43ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 32' 15.780 N
		<b>Longitude:</b>	112° 51' 51.900 W
		<b>Grid Convergence:</b>	-0.87 °

<b>Well</b>	Federal 21-1		
<b>Well Position</b>	+N/-S	0.0 ft	<b>Northing:</b> 7,367,494.43 ft
	+E/-W	0.0 ft	<b>Easting:</b> 1,261,197.43 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40° 32' 15.780 N
		<b>Longitude:</b>	112° 51' 51.900 W
		<b>Ground Level:</b>	0.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF200510	2009/11/19	12.65	65.68	52,353

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	274.75	

<b>Survey Program</b>	Date 2009/12/08				
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
1,368.0	7,982.0	Survey #1 (Wellbore #1)	MWD	MWD	

<b>Survey</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical Section</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,368.0	1.70	104.90	1,367.8	-5.2	19.6	-20.0	0.12	0.12	0.00	
1,948.0	1.60	213.20	1,947.7	-14.2	23.5	-24.6	0.46	-0.02	18.67	
2,565.0	6.10	299.20	2,563.4	-5.4	-9.9	9.4	1.00	0.73	13.94	
2,619.0	5.60	291.80	2,617.1	-3.0	-14.8	14.5	1.67	-0.93	-13.70	
2,683.0	4.30	281.80	2,680.9	-1.4	-20.1	19.9	2.43	-2.03	-15.62	
2,746.0	4.70	277.70	2,743.7	-0.6	-24.9	24.8	0.81	0.63	-6.51	
2,809.0	3.80	268.60	2,806.5	-0.3	-29.6	29.5	1.78	-1.43	-14.44	
2,871.0	3.60	250.10	2,868.4	-1.0	-33.5	33.3	1.94	-0.32	-29.84	
2,912.0	3.50	244.70	2,909.3	-1.9	-35.8	35.5	0.85	-0.24	-13.17	
2,976.0	2.90	244.00	2,973.2	-3.5	-39.0	38.6	0.94	-0.94	-1.09	
3,039.0	3.20	252.10	3,036.1	-4.7	-42.1	41.6	0.83	0.48	12.86	
3,102.0	2.40	251.00	3,099.0	-5.7	-45.1	44.4	1.27	-1.27	-1.75	



# Survey Report

**Company:** V. A. Resources  
**Project:** Skull Valley  
**Site:** Federal 21-1  
**Well:** Federal 21-1  
**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**  
**Database:**

Well Federal 21-1  
 WELL @ 0.0ft (Original Well Elev)  
 WELL @ 0.0ft (Original Well Elev)  
 True  
 Minimum Curvature  
 EDM 2003.16 Single User Db

## Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,165.0	2.10	264.20	3,162.0	-6.2	-47.5	46.8	0.95	-0.48	20.95
3,228.0	1.90	263.10	3,225.0	-6.5	-49.6	48.9	0.32	-0.32	-1.75
3,291.0	2.60	278.10	3,287.9	-6.4	-52.1	51.4	1.44	1.11	23.81
3,354.0	3.20	295.10	3,350.8	-5.5	-55.1	54.5	1.65	0.95	26.98
3,417.0	2.30	301.80	3,413.8	-4.1	-57.8	57.2	1.51	-1.43	10.63
3,481.0	4.50	284.60	3,477.6	-2.7	-61.3	60.9	3.75	3.44	-26.87
3,544.0	4.00	286.90	3,540.5	-1.5	-65.8	65.4	0.84	-0.79	3.65
3,576.0	3.00	294.30	3,572.4	-0.8	-67.6	67.3	3.42	-3.12	23.12
3,606.0	3.10	290.70	3,602.4	-0.2	-69.1	68.8	0.72	0.33	-12.00
3,636.0	3.20	283.70	3,632.3	0.3	-70.7	70.4	1.32	0.33	-23.33
3,667.0	3.30	280.70	3,663.3	0.7	-72.4	72.2	0.64	0.32	-9.68
3,699.0	3.60	277.60	3,695.2	1.0	-74.3	74.1	1.10	0.94	-9.69
3,731.0	2.30	278.40	3,727.2	1.2	-75.9	75.7	4.06	-4.06	2.50
3,762.0	1.90	270.90	3,758.1	1.3	-77.0	76.9	1.56	-1.29	-24.19
3,794.0	2.20	280.50	3,790.1	1.4	-78.2	78.0	1.42	0.94	30.00
3,825.0	2.60	274.60	3,821.1	1.6	-79.5	79.3	1.51	1.29	-19.03
3,856.0	3.00	279.60	3,852.1	1.8	-81.0	80.8	1.51	1.29	16.13
3,887.0	3.30	279.70	3,883.0	2.0	-82.6	82.5	0.97	0.97	0.32
3,919.0	3.00	291.80	3,915.0	2.5	-84.3	84.2	2.27	-0.94	37.81
3,951.0	3.30	288.80	3,946.9	3.1	-86.0	85.9	1.07	0.94	-9.37
3,982.0	3.90	286.90	3,977.9	3.7	-87.8	87.8	1.97	1.94	-6.13
4,014.0	4.20	285.70	4,009.8	4.3	-90.0	90.0	0.97	0.94	-3.75
4,045.0	4.10	285.10	4,040.7	4.9	-92.2	92.3	0.35	-0.32	-1.94
4,077.0	3.50	286.70	4,072.6	5.5	-94.2	94.3	1.90	-1.87	5.00
4,108.0	3.40	287.60	4,103.6	6.1	-96.0	96.2	0.37	-0.32	2.90
4,140.0	3.30	279.80	4,135.5	6.5	-97.8	98.0	1.46	-0.31	-24.37
4,171.0	3.30	279.30	4,166.5	6.8	-99.6	99.8	0.09	0.00	-1.61
4,202.0	3.30	280.40	4,197.4	7.1	-101.3	101.6	0.20	0.00	3.55
4,233.0	3.80	283.00	4,228.4	7.5	-103.2	103.5	1.69	1.61	8.39
4,265.0	4.30	281.60	4,260.3	8.0	-105.4	105.7	1.59	1.56	-4.37
4,296.0	4.50	279.00	4,291.2	8.4	-107.7	108.1	0.91	0.65	-8.39
4,328.0	4.30	273.20	4,323.1	8.7	-110.2	110.5	1.52	-0.62	-18.12
4,360.0	3.80	268.10	4,355.0	8.7	-112.4	112.8	1.92	-1.56	-15.94
4,390.0	3.60	268.20	4,384.9	8.6	-114.4	114.7	0.67	-0.67	0.33
4,422.0	2.70	274.40	4,416.9	8.7	-116.1	116.4	3.00	-2.81	19.37
4,453.0	1.80	277.70	4,447.9	8.8	-117.3	117.7	2.93	-2.90	10.65
4,485.0	1.50	277.70	4,479.9	8.9	-118.2	118.6	0.94	-0.94	0.00
4,517.0	1.50	282.50	4,511.8	9.1	-119.1	119.4	0.39	0.00	15.00
4,548.0	1.50	267.20	4,542.8	9.1	-119.9	120.2	1.29	0.00	-49.35
4,580.0	2.00	266.10	4,574.8	9.1	-120.8	121.2	1.57	1.56	-3.44
4,610.0	2.70	267.70	4,604.8	9.0	-122.1	122.4	2.34	2.33	5.33
4,642.0	2.20	277.00	4,636.8	9.1	-123.4	123.8	1.99	-1.56	29.06
4,674.0	2.60	288.50	4,668.7	9.4	-124.7	125.1	1.95	1.25	35.94
4,705.0	3.80	289.70	4,699.7	9.9	-126.4	126.8	3.88	3.87	3.87
4,737.0	4.60	290.40	4,731.6	10.7	-128.6	129.0	2.51	2.50	2.19
4,768.0	4.00	283.50	4,762.5	11.4	-130.8	131.3	2.55	-1.94	-22.26
4,799.0	4.00	276.00	4,793.4	11.8	-132.9	133.4	1.69	0.00	-24.19
4,831.0	4.00	271.60	4,825.4	11.9	-135.1	135.7	0.96	0.00	-13.75
4,863.0	2.80	266.50	4,857.3	11.9	-137.0	137.6	3.86	-3.75	-15.94
4,894.0	2.40	271.40	4,888.3	11.9	-138.4	139.0	1.48	-1.29	15.81
4,926.0	3.00	278.40	4,920.2	12.0	-139.9	140.5	2.14	1.87	21.87
4,957.0	3.30	289.30	4,951.2	12.4	-141.6	142.1	2.16	0.97	35.16
4,989.0	3.30	298.80	4,983.1	13.2	-143.3	143.9	1.71	0.00	29.69
5,020.0	3.30	302.30	5,014.1	14.1	-144.8	145.5	0.65	0.00	11.29

Survey Report

Company: V. A. Resources  
Project: Skull Valley  
Site: Federal 21-1  
Well: Federal 21-1  
Wellbore: Wellbore #1  
Design: Wellbore #1

Local Co-ordinate Reference: Well Federal 21-1  
TVD Reference: WELL @ 0.0ft (Original Well Elev)  
MD Reference: WELL @ 0.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
Database: EDM 2003.16 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,052.0	2.90	282.30	5,046.0	14.8	-146.4	147.1	3.58	-1.25	-62.50
5,083.0	2.90	256.10	5,077.0	14.7	-147.9	148.6	4.24	0.00	-84.52
5,115.0	2.60	233.10	5,109.0	14.1	-149.3	149.9	3.55	-0.94	-71.87
5,146.0	1.10	192.50	5,140.0	13.4	-149.9	150.5	6.14	-4.84	-130.97
5,177.0	0.60	172.60	5,170.9	12.9	-149.9	150.5	1.85	-1.61	-64.19
5,208.0	0.60	227.80	5,201.9	12.7	-150.0	150.6	1.79	0.00	178.06
5,240.0	1.40	271.80	5,233.9	12.6	-150.5	151.1	3.29	2.50	137.50
5,272.0	2.70	276.00	5,265.9	12.7	-151.7	152.2	4.09	4.06	13.12
5,303.0	3.20	270.20	5,296.9	12.7	-153.3	153.8	1.88	1.61	-18.71
5,334.0	3.40	273.50	5,327.8	12.8	-155.1	155.6	0.89	0.65	10.65
5,366.0	4.30	277.70	5,359.8	13.0	-157.2	157.7	2.95	2.81	13.12
5,398.0	4.60	275.10	5,391.7	13.3	-159.7	160.2	1.13	0.94	-8.12
5,429.0	4.40	271.60	5,422.6	13.4	-162.1	162.6	1.10	-0.65	-11.29
5,461.0	4.40	264.40	5,454.5	13.3	-164.5	165.1	1.73	0.00	-22.50
5,493.0	4.20	253.50	5,486.4	12.9	-166.9	167.4	2.62	-0.62	-34.06
5,524.0	3.90	258.70	5,517.3	12.4	-169.0	169.5	1.53	-0.97	16.77
5,556.0	3.40	260.30	5,549.2	12.0	-171.0	171.4	1.59	-1.56	5.00
5,587.0	3.70	261.20	5,580.2	11.7	-172.9	173.3	0.98	0.97	2.90
5,619.0	4.00	260.40	5,612.1	11.3	-175.0	175.4	0.95	0.94	-2.50
5,650.0	3.30	273.00	5,643.0	11.2	-177.0	177.3	3.42	-2.26	40.65
5,682.0	2.90	290.90	5,675.0	11.5	-178.7	179.0	3.26	-1.25	55.94
5,713.0	3.10	303.40	5,706.0	12.3	-180.1	180.5	2.20	0.65	40.32
5,744.0	3.90	306.40	5,736.9	13.4	-181.6	182.1	2.65	2.58	9.68
5,775.0	4.70	302.20	5,767.8	14.7	-183.6	184.1	2.77	2.58	-13.55
5,807.0	4.20	302.30	5,799.7	16.0	-185.7	186.3	1.56	-1.56	0.31
5,839.0	3.30	303.20	5,831.6	17.1	-187.4	188.2	2.82	-2.81	2.81
5,871.0	2.70	310.20	5,863.6	18.1	-188.8	189.6	2.19	-1.87	21.87
5,902.0	3.00	315.50	5,894.6	19.2	-189.9	190.8	1.29	0.97	17.10
5,934.0	3.70	313.80	5,926.5	20.5	-191.2	192.3	2.21	2.19	-5.31
5,965.0	4.00	296.40	5,957.4	21.7	-192.9	194.0	3.87	0.97	-56.13
5,997.0	4.70	281.40	5,989.3	22.4	-195.2	196.4	4.16	2.19	-46.87
6,029.0	5.10	275.40	6,021.2	22.8	-197.9	199.1	2.03	1.25	-18.75
6,061.0	5.10	273.70	6,053.1	23.0	-200.7	202.0	0.47	0.00	-5.31
6,092.0	5.30	270.00	6,084.0	23.1	-203.5	204.8	1.26	0.65	-11.94
6,124.0	5.30	265.20	6,115.8	23.0	-206.5	207.7	1.39	0.00	-15.00
6,154.0	5.00	266.00	6,145.7	22.8	-209.2	210.4	1.03	-1.00	2.67
6,186.0	5.20	261.90	6,177.6	22.5	-212.0	213.1	1.30	0.62	-12.81
6,218.0	5.10	259.60	6,209.5	22.0	-214.8	215.9	0.72	-0.31	-7.19
6,250.0	5.10	257.70	6,241.3	21.5	-217.6	218.7	0.53	0.00	-5.94
6,281.0	4.70	259.40	6,272.2	20.9	-220.2	221.2	1.37	-1.29	5.48
6,313.0	3.90	259.80	6,304.1	20.5	-222.6	223.5	2.50	-2.50	1.25
6,345.0	3.10	254.00	6,336.1	20.1	-224.5	225.4	2.73	-2.50	-18.12
6,376.0	2.90	250.50	6,367.0	19.6	-226.0	226.9	0.87	-0.65	-11.29
6,408.0	3.10	265.80	6,399.0	19.2	-227.7	228.5	2.57	0.62	47.81
6,453.0	4.60	271.60	6,443.9	19.2	-230.7	231.5	3.44	3.33	12.89
6,471.0	5.10	272.30	6,461.8	19.3	-232.2	233.0	2.80	2.78	3.89
6,502.0	5.20	273.50	6,492.7	19.4	-235.0	235.8	0.47	0.32	3.87
6,534.0	4.70	269.60	6,524.6	19.5	-237.7	238.5	1.88	-1.56	-12.19
6,566.0	3.40	263.30	6,556.5	19.4	-240.0	240.8	4.29	-4.06	-19.69
6,597.0	2.70	259.80	6,587.4	19.1	-241.6	242.4	2.34	-2.26	-11.29
6,628.0	2.60	262.80	6,618.4	18.9	-243.0	243.8	0.55	-0.32	9.68
6,659.0	2.50	262.30	6,649.4	18.7	-244.4	245.1	0.33	-0.32	-1.61
6,691.0	2.40	259.10	6,681.4	18.5	-245.8	246.4	0.53	-0.31	-10.00
6,723.0	2.30	249.80	6,713.3	18.2	-247.0	247.7	1.23	-0.31	-29.06

# Survey Report

**Company:** V. A. Resources  
**Project:** Skull Valley  
**Site:** Federal 21-1  
**Well:** Federal 21-1  
**Wellbore:** Wellbore #1  
**Design:** Wellbore #1

**Local Co-ordinate Reference:** Well Federal 21-1  
**TVD Reference:** WELL @ 0.0ft (Original Well Elev)  
**MD Reference:** WELL @ 0.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Single User Db

## Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,754.0	2.30	243.60	6,744.3	17.7	-248.2	248.8	0.80	0.00	-20.00
6,785.0	2.70	247.00	6,775.3	17.1	-249.4	249.9	1.38	1.29	10.97
6,817.0	2.60	248.50	6,807.2	16.5	-250.8	251.3	0.38	-0.31	4.69
6,849.0	1.80	234.10	6,839.2	16.0	-251.8	252.3	3.02	-2.50	-45.00
6,880.0	1.80	236.90	6,870.2	15.4	-252.6	253.0	0.28	0.00	9.03
6,911.0	2.00	246.40	6,901.2	15.0	-253.5	253.9	1.20	0.65	30.65
6,943.0	2.50	253.60	6,933.2	14.5	-254.7	255.1	1.79	1.56	22.50
6,975.0	2.70	256.80	6,965.1	14.2	-256.1	256.4	0.77	0.62	10.00
7,006.0	2.80	255.40	6,996.1	13.8	-257.6	257.8	0.39	0.32	-4.52
7,037.0	3.10	254.70	7,027.1	13.4	-259.1	259.3	0.97	0.97	-2.26
7,068.0	3.10	253.80	7,058.0	12.9	-260.7	260.9	0.16	0.00	-2.90
7,100.0	2.90	255.10	7,090.0	12.5	-262.3	262.5	0.66	-0.62	4.06
7,132.0	2.70	254.00	7,121.9	12.1	-263.8	263.9	0.65	-0.62	-3.44
7,164.0	3.00	255.20	7,153.9	11.7	-265.4	265.4	0.96	0.94	3.75
7,195.0	3.10	258.00	7,184.8	11.3	-267.0	267.0	0.58	0.32	9.03
7,227.0	2.70	271.00	7,216.8	11.1	-268.6	268.6	2.40	-1.25	40.62
7,258.0	2.80	272.30	7,247.8	11.1	-270.1	270.1	0.38	0.32	4.19
7,289.0	2.80	268.60	7,278.7	11.2	-271.6	271.6	0.58	0.00	-11.94
7,321.0	2.60	267.90	7,310.7	11.1	-273.1	273.1	0.63	-0.62	-2.19
7,353.0	2.50	265.60	7,342.7	11.0	-274.5	274.5	0.45	-0.31	-7.19
7,384.0	2.40	263.80	7,373.6	10.9	-275.8	275.8	0.41	-0.32	-5.81
7,415.0	2.50	265.20	7,404.6	10.8	-277.1	277.1	0.38	0.32	4.52
7,446.0	2.30	258.20	7,435.6	10.6	-278.4	278.4	1.14	-0.65	-22.58
7,478.0	1.90	249.10	7,467.6	10.3	-279.6	279.4	1.62	-1.25	-28.44
7,510.0	1.80	232.70	7,499.5	9.8	-280.5	280.3	1.68	-0.31	-51.25
7,542.0	1.70	221.10	7,531.5	9.1	-281.2	281.0	1.15	-0.31	-36.25
7,573.0	1.70	215.00	7,562.5	8.4	-281.7	281.5	0.58	0.00	-19.68
7,604.0	1.80	213.60	7,593.5	7.6	-282.3	281.9	0.35	0.32	-4.52
7,636.0	1.80	209.50	7,625.5	6.8	-282.8	282.4	0.40	0.00	-12.81
7,667.0	1.80	205.10	7,656.5	5.9	-283.2	282.7	0.45	0.00	-14.19
7,699.0	1.80	206.90	7,688.4	5.0	-283.7	283.1	0.18	0.00	5.62
7,731.0	1.90	201.30	7,720.4	4.1	-284.1	283.5	0.65	0.31	-17.50
7,763.0	1.80	193.90	7,752.4	3.1	-284.4	283.7	0.81	-0.31	-23.12
7,794.0	1.90	189.00	7,783.4	2.1	-284.6	283.8	0.60	0.32	-15.81
7,824.0	1.90	191.10	7,813.4	1.1	-284.8	283.9	0.23	0.00	7.00
7,856.0	1.90	207.10	7,845.4	0.1	-285.1	284.2	1.65	0.00	50.00
7,888.0	1.90	224.30	7,877.3	-0.7	-285.7	284.7	1.78	0.00	53.75
7,919.0	2.20	237.60	7,908.3	-1.4	-286.6	285.5	1.81	0.97	42.90
7,950.0	2.30	241.00	7,939.3	-2.0	-287.6	286.5	0.54	0.32	10.97
7,982.0	2.40	244.90	7,971.3	-2.6	-288.8	287.6	0.59	0.31	12.19

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_